Instruction Manual

HI 983327-0
HI 983327-1
HI 98332700

Panel-Mounted EC Indicators & Controllers

HANNA instruments

facturers since 1978

These Instruments are in Compliance with the CE Directives

WARRANTY

meters are warranted for two years against defects in work-
ip and materials when used for their intended purpose and
ained according to instructions. The probe is warranted for a
of six months. This warranty is limited to repair or replacement
charge.

ges due to accident, misuse, tampering or lack of prescribed main-
e are not covered.

ice is required, contact the dealer from whom you purchased the
nent. If under warranty, report the model number, date of pur-
serial number and the nature of the failure. If the repair is not
d by the warranty, you will be notified of the charges incurred. If
strument is to be returned to Hanna Instruments, first obtain a
ed Goods Authorization Number from the Customer Service depart-
and then send it with shipment costs prepaid. When shipping any
nent, make sure it is properly packaged for complete protection.

date your warranty, fill out and return the enclosed warranty card
14 days from the date of purchase.

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Woonsocket, Rhode Island, 02895 , USA.*

a Instruments reserves the right to modify the design, construc-
and appearance of its products without advance notice.

Dear Customer,

Thank you for choosing a Hanna product. This manual will provide you with the necessary information for the correct operation of the meter. Please read it carefully before using the meter. If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com.

These instruments are in compliance with the CE directives.

PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully. If any damage has occurred during shipment, immediately notify your Dealer or the nearest Hanna Customer Service Center.

The meter is supplied with:

- Instruction manual;
- Mounting brackets.

Note: Conserve all packing material until the instrument has been observed to function correctly. Any defective item must be returned in its original packing.

GENERAL DESCRIPTION

HI 983327-0, HI 983327-1 and HI 98332700 are conductivity indicators and controllers with a relay output designed for simplicity of use in a wide range of applications.

HI 98332700 is provided with a DC/DC converter which isolates the measure system from the external power supply.

The models are panel mounted with membrane keypads on the front panel and an easy-to-read LCD display.

All the meters automatically compensate for the temperature variation. The probe is easy to clean and requires little maintenance.

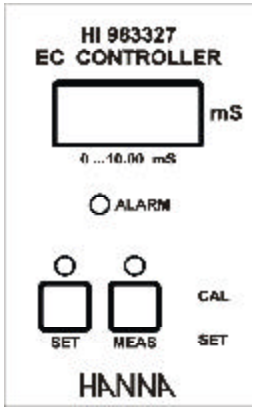
Measurements are highly accurate and the meters can be calibrated at one point.

Power supply, wiring and selection are made via the plug-in terminal blocks on the rear panel.

LED indicators on the front panel identify whether the controller is in set or measurement mode, and if alarm is active.

FUNCTIONAL DESCRIPTION

FRONT PANEL



Keypad

SET	To display setpoint
MEAS	To display measurement

Trimmers

CAL	For calibration
SET	To adjust setpoint

LEDs

SET	ON when LCD displays the set value
MEAS	ON when LCD displays the measured value
ALARM	ON when alarm contact is activated

REAR PANEL

1. Power Supply:

HI 983327-0 HI98332700	HI 983327-1
12 VDC	115/230 VAC

L1:	Positive	230 VAC
L2:	Negative	115 VAC
L3:	-----	Neutral
L4:	-----	Protection Earth

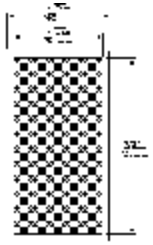
Note: the power input is internally protected by a 400 mA fuse

2. Alarm Contact: A1, A2.
   This contact acts as a switch for the power. The contact has to be protected outside by the user.

3. Probe Connection: follow the above diagram and conne
   colored wires of probe cable as indicated. It is recomm
   to connect the shield (P5) to avoid any interference.

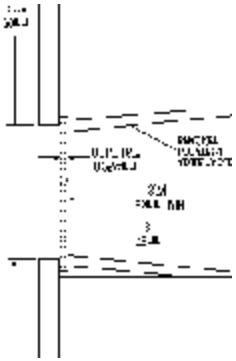
HI983327 LAYOUT

Front view of the panel-mounted unit

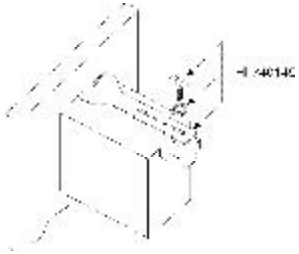


Side view of the panel-mounted unit

Supplied adjustable location brackets allow the controller to slide into the cutout and will hold the unit securely in place. 95 mm (3.74") is the minimum amount of space required to install the controller.



Panel-mounted unit assembling view



OPERATIONAL GUIDE

ER CONNECTION

3327-0 and HI 98332700

ct a 2-wire power cable to the terminal strip while g attention to the correct positive and negative con- (12 VDC).

3327-1

ct a 3-wire power cable to the terminal strip while g attention to the correct earth, neutral and line ts (115/230 VAC).

:

external cables connected to the rear panel should d with wire lugs.

is recommended to cover the unused terminals with ulating tape.

start up the meter needs a few seconds to stabilize. ait until a stable reading is displayed.

M CONTACT

is contact (maximum 5A, 240VAC, 30VDC) for connec- o an alarm or dosing system. The unit acts as a switch ntrol an external device.

ATING THE METER

erations can be controlled via front panel keys and ers.

' and "MEAS" LEDs light up to indicate which is the ting function.

sure that the meter is calibrated and the Setpoint is rly selected before performing any measurement.

the probe to the meter. Install the probe in the s or immerse it in the solution to be monitored, while g sure that metal pins are completely submerged. the "MEAS" key.

CD will show the conductivity value of the solution in n unit. Any initial variation on readings may be due to temperature compensation.

The "ALARM" LED will light up when the alarm contact is losed, to indicate an EC value higher than selected setpoint.

CALIBRATION

Make sure the meter is in the measurement mode (the "MEAS" LED lights on).

Immerse the probe in HI 7039 (5.00 mS/cm) calibration solution.

Shake briefly and wait for reading to stabilize.

Using a small screwdriver adjust the calibration trimmer until the meter displays "5.00" on the LCD.

SETPOINT

Press the "SET" key. The display will show the default or previously adjusted value for the setpoint.

Using a small screwdriver, adjust the "SET" trimmer until the required limit value is displayed.

PROBE MAINTENANCE

To improve probe performance and prolong its life, it is recommended to clean it regularly.

- Immerse the tip of the probe in HI 7061 Cleaning Solution at least for one hour.
- If a more thorough cleaning is required, brush the metal pins with very fine sandpaper.
- After cleaning, rinse the probe with tap water and recalibrate the meter.
- When not in use, clean the probe before storing it.

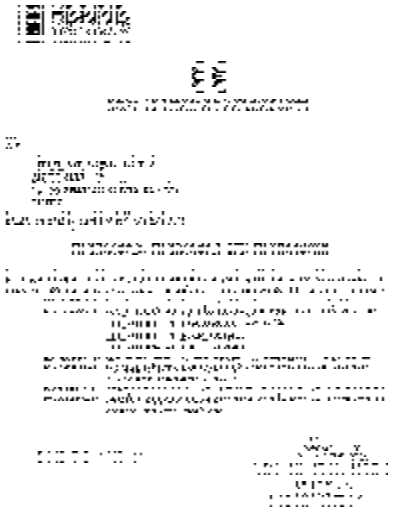
ACCESSORIES

HI 7632-00	EC probe
HI 70039P	5.00 mS/cm (5000 µS/cm) calibration solution, 20mL sachet (25 pcs)
HI 7039M	5.00 mS/cm (5000 µS/cm) calibration solution, 230mL bottle
HI 7061M	Electrode cleaning solution, 230 mL bottle
HI 710005	12 VDC power adapter, US plug
HI 710006	12 VDC power adapter, European plug
HI 710012	12 VDC power adapter, Australian plug
HI 710013	12 VDC power adapter, Southern Africa plug
HI 710014	12 VDC power adapter, UK plug
HI 731326	Calibration Screwdriver (20 pcs)
HI 740146	Mounting brackets

SPECIFICATIONS

	HI 983327
Range	0.00 to 10.00 mS/cm
Resolution	0.01 mS/cm
Accuracy (@ 20°C)	±2% f.s.
Setpoint	Adjustable through multiturn trimmer
Alarm Condition	LED ON and alarm contact closed when measured EC value is higher than setpoint
Alarm Output	2-contact relay, no fuse protected. 5A, 240 VAC, 30 VDC
Probe	HI 7632-00 EC probe
Temp.Compensation	Automatic from 5 to 50°C (41 to 122°F); ß = 2%/°C
Calibration	Manual, at one point through trimmer
Calibration Solution	HI 7039 (5.00 mS/cm)
Power supply:	External
HI 983327-0	12VDC
HI 98332700	12VDC isolated inside with DC/DC converter
HI 983327-1	115/230 VAC; 50/60Hz
Dimensions	79 x 49 x 95 mm (3.1 x 1.9 x 3.7")
Weight:	
HI 983327-0, HI 98332700	140 g (4.96 oz)
HI 983327-1	250 g (8.85 oz)

CE DECLARATION OF CONFORMITY



Recommendations for Users

Before using these products, make sure that they are entirely suita the environment in which they are used. Operation of these instrum residential areas could cause unacceptable interferences to radio a equipment. The metal band at the end of the probe is sensitive to e static discharges. Avoid touching this metal band at all times. Duri eration, ESD wrist straps should be worn to avoid possible damage probe by electrostatic discharges. Any variation introduced by the the supplied equipment may degrade the instrument's EMC perform

To avoid electrical shock, do not use these instruments when voltage measurement surface exceeds 24 VAC or 60 VDC. Use plastic beakers t mize any EMC interferences.

To avoid damage or burns, do not perform any measurement in micr ovens.